

**REMARKS****I. General**

The issues outstanding in the instant application are as follows:

- Claims 1-3, 6, 13-19, and 20-24 appear to stand rejected under 35 U.S.C. § 103(a) as unpatentable over *Pecen*, United States Patent Number 6,603,825 (hereinafter *Pecen*) in view of *Jagger* et al., United States Patent Number 6,807,405 (hereinafter *Jagger*).
- Claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as unpatentable over *Pecen* in view of *Jagger* in further view of *Hiramatsu* et al., United States Patent Number 6,463,261 (hereinafter *Hiramatsu*).
- Claims 7 and 25-30 stand rejected under 35 U.S.C. § 103(a) as unpatentable over *Pecen* in view of *Jagger* in further view of *Sanderford* Jr. et al., United States Patent Number 5,668,828 (hereinafter *Sanderford*).
- Claims 8 and 11 stand rejected under 35 U.S.C. § 103(a) as unpatentable over *Pecen* in view of *Jagger* in further view of *Eidson* et al., United States Patent Number 6,256,477 (hereinafter *Eidson*).
- Claim 9 stands rejected under 35 U.S.C. § 103(a) as unpatentable over *Pecen* in view of *Jagger* in further view of *Lempiainen*, United States Patent Number 6,510,312 (hereinafter *Lempiainen*).
- Claims 10 and 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over *Pecen* in view of *Jagger* in further view of *Gutleber*, United States Patent Number 4,457,007 (hereinafter *Gutleber*).

Applicant respectfully traverses these rejections and requests reconsideration in light of the arguments presented below. Claims 1-30 remain pending in this application.

**II. Ambiguities in the Office Action**

If the present application is not allowed in light of the arguments presented below. Applicant requests a new non-final Office Action clarifying ambiguities in the Office Action dated June 14, 2005 (hereinafter Office Action). On page 7 of the Office Action, claim 12 stands rejected as unpatentable over *Pecen* in view of *Jagger* “further in view of *Gutleber* (US Patent 4,457,007).” However, page 8 of the Office Action goes on to say *Gould* et al. (Col. 5, lines 39-52) teaches the limitations in claim 12. Accordingly, Applicant respectfully

points out that the rejection of claim 12 does not comport with Office Policy, in that the Examiner has not “clearly articulate[d] any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise respond completely at the earliest opportunity,” M.P.E.P. § 706. Applicants therefore request that the Examiner set forth unambiguous grounds for rejection with respect to claim 12, in a non-final Office Action, in order that the Applicant may have a full and fair opportunity to explore the patentability of this claim.

Also, the Office Action, on page 2, cites “Pecen (U.S. Patent 6,603,805B1)”. However, U.S. Pat. No. 6,603,805 list Hisano et al. as Inventors. Further, on page 8 of the Office Action “Pecen (U.S. Patent 6,603,825)” is cited in addressing claims 20–24. From the drawing and text reference in the Office Action it appears that the Examiner intended to cite Pecen, U.S. Pat. No. 6,603,825 in both instances. However, if this is not the case, Applicant requests that this inconsistency also be cleared up in a non-final Office Action.

Additionally, on page 10 the Office Action states “claim 26 inherits all limitations of claim 20.” However, Applicant respectfully points out that claim 26 is an independent claim, and thereby does not inherit the limitations of any claim. Further, claim 26 recites limitations not present in claim 20. For example, claim 26 recites “a statistics gathering engine collecting periodicity, duration and strength information about RF interference,” which differs significantly from any limitation of claim 20. Accordingly, Applicant respectfully points out that the rejection of independent claim 26 does not comport with Office Policy, in that the Examiner has not clearly articulated the rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise respond completely at the earliest opportunity. Applicants therefore request that the Examiner set forth the grounds for rejection with respect to independent claim 26, in a non-final Office Action, in order that the Applicant may have a full and fair opportunity to explore the patentability of claims 26-30.

### **III. Prima Facie Case of Obviousness Has Not Been Established**

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the

knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. See M.P.E.P. § 2143. Therefore, without conceding the second criterion, Applicant respectfully asserts that the rejection fails to satisfy the first and third criteria.

**A. The Suggested Combination Fails to Teach all the Limitations**

**1. Rejections of Claims 1–12**

Claim 1 recites “means for tabulating statistical information about periodicity and duration of RF interference.” The Office Action cites *Jagger* Col. 5, lines 21-34, as teaching these limitations, however *Jagger* fails to teach “tabulating statistical information.” Office Action page 2. Instead, *Jagger* teaches providing information to a system manager and fails to disclose tabulating such information. *Jagger*, Col. 5, lines 21-25. Furthermore, *Jagger* fails to teach “tabulating statistical information about periodicity...of RF interference.” *Jagger* only teaches gathering the “time of occurrence, frequency, and duration of interfering signal presence.” *Jagger*, Col. 5, lines 23-25. *Jagger* does not disclose gathering information about the “periodicity...of RF interference” as required by claim 1. While *Jagger* does use the word “periodic,” an analysis of *Jagger*’s use of the word reveals *Jagger* teaches occasionally (periodically) records can be made of the received CDMA power level. *Jagger*, Col. 5, line 25. Therefore, *Jagger*’s use of the word “periodic” has a separate and distinct meaning from claims 1’s use of the word “periodicity.” As a result, *Jagger* fails to disclose “statistical information about periodicity...of RF interference”, as well as failing to disclose tabulating such information.

Furthermore, claim 1 recites “means operable, at least in part, to certain tabulated statistics for directing the gain of said gain control system.” The Office Action cites *Pecen* col. 2, lines 44-59 as teaching this limitation. However, *Pecen* teaches directing gain adjustments based on “a signal quality measurement” measured by a remote receiver, instead of “means operable...to certain tabulated statistics” as required by claim 1. *Pecen*, Col. 3, lines 65-66. As a result, *Pecen* fails to teach this limitation.

Thus, the combination of *Jagger* and *Pecen* fail to teach or suggest each limitation of claim 1. Therefore, Applicant respectfully contends claim 1 is patentable over the 35 U.S.C. § 103(a) rejection of the record. Claims 2-12 ultimately depend from claim 1 and inherit all the limitations of independent claim 1. Therefore, at least for the reasons advanced above, Applicant respectfully asserts each of claims 2-12 are patentable over the 35 U.S.C. § 103(a) rejections of the record. Furthermore, various ones of claims 2-12 set forth further limitations not taught by the cited references.

For example, claims 2 and 3 recite “means for tabulating” and claims 6 and 11 recite “means operable...to certain tabulated statistics.” The Office Action cites *Jagger*, col. 5, lines 21-34 as teaching “tabulating” and “tabulated statistics.” Office Action Page 2. However, *Jagger* only discloses providing information to a systems manager and fails to disclose how the information is provided to the systems manager. *Jagger*, Col. 5, line 22. As a result, *Jagger* fails to disclose “tabulating” or “tabulated statistics.” Therefore, Applicant respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejections of claims 2, 3, 6, and 11. In another example, claim 7 recites “means operable...to certain tabulated statistics for scheduling transmissions to avoid said interference. The Office Action cites *Sanderford*, Col. 3, lines 17-40 as teaching these limitations, however *Sanderford* fails to teach scheduling transmissions according to tabulated statistics. Office Action page 5. In fact, *Sanderford* teaches away using tabulated statistics for scheduling transmissions. Col. 3, lines 17-40 explain the number of retransmissions and the average time between transmissions are pre-selected and made programmable (rather than being based on statistics) which allows optimization to a particular installation. As a result, Applicant respectfully contends claim 7 is further patentable over the rejection of record.

In yet another example, claim 9 recites “means operable...to certain tabulated statistics for changing antenna polarity.” The Office Action cites *Lempiainen*, Col. 1, lines 42-63 as teaching this limitation. Office Action page 6. However, *Lempiainen* fails teach means operable...to certain tabulated statistics for changing antenna polarity.” Instead, *Lempiainen* teaches orientating the antenna lobe *towards terminal equipment* to reduce transmission power. Col. 1, lines 42-63. While such an orientation might result in reduction of interference, *Lempiainen* is silent concerning polarity, much less changing polarity based

on tabulated statistics. Therefore, Applicant respectfully requests withdrawal of the 35 U.S.C. § 103(a) rejection of claim 9.

In a final example, claim 10 recites “means operable...to certain tabulated statistics for performing waveform subtraction.” The Office Action cites *Gutleber*’s abstract as teaching these limitations. Office Action page 7. However, *Gutleber* fails to teach “means operable...to certain tabulated statistics for performing waveform subtraction of said interference.” *Gutleber* discloses delaying the signal, increasing multiples of the pulse width, and then subtracting out all multipath amplitudes of significance. Abstract. Nothing in *Gutleber* teaches or suggests the use of tabulated statistics in its subtraction and as a result *Gutleber* fails to teach the limitations of claim 10. Therefore, Applicant respectfully asserts claim 10 is further patentable over the rejection of record.

## **2. Rejections of Claims 13-19**

Claim 13 recites “gather statistical information about periodicity...of RF interference.” The Office Action cites *Jagger* col. 5, lines 21-34 as teaching this limitation, however, as discussed above *Jagger* fails to teach gathering information about the periodicity of interference. *Jagger* only discloses gathering information about “time of occurrence, frequency, and duration of interfering signal presence” but fails to gather information about the period of “interfering signal presence.”

Furthermore, claim 13 recites “directing gain of said gain control circuit under at least partial control of said gathered statistical information.” The Office Action cites *Pecen*, col. 4, lines 13-28 as teaching this limitation, however *Pecen* does not direct the gain of the gain control circuit according to gathered statistical information about an interfering signal’s periodicity and duration as required by claim 13. *Pecen* explains the gain control uses signal quality measurements of the *desired* signal, for example its bit error rate, in determining whether the gain should be lowered, rather than statistical information about the period and duration of the *interfering* signal. Col. 3, line 64 – col. 4, line 11. As a result, *Pecen* fails to teach directing gain based on gathered statistical information regarding periodicity and duration of RF interference.

Further still, claim 13 recites “directing gain...to mitigate effects of said interference.” The Office Action fails to cite a reference as teaching this claim limitation. As such, , Applicant respectfully points out that the rejection of claim 13 does not comport with Office Policy, in that the Examiner has not clearly articulated the rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise respond completely at the earliest opportunity. Applicants therefore request that the Examiner set forth the grounds for rejection with respect to this limitation of claim 13, in a non-final Office Action, in order that the Applicant may have a full and fair opportunity to explore the patentability of claims 13-19.

Regardless, Applicant’s review *Pecen* in view of *Jagger* reveals that the combination fails to teach “directing gain...to mitigate effects of said interference.” Rather, *Pecen* col. 4, lines 17-21 explains the gain control is provided to ensure the receiver amplifiers are operating in their linear range, and fails to disclose controlling gain “to mitigate effects of said interference.”

For at least the above reasons, Applicant respectfully asserts the combination suggested fails to teach or suggest every limitation of claim 13. Thereby, claim 13 is patentable over the 35 U.S.C. § 103(a) rejection of record.

Claims 14-19 ultimately depend from claim 13 and inherit all the limitations of independent claim 13. Therefore, at least for the reasons advanced above, Applicant respectfully asserts each of claims 14-19 are patentable over the 35 U.S.C. § 103(a) rejections of the record.

### 3. Claims 20-25

Independent claim 20 recites “a digital delay stage delaying incoming RF data signals and outputting delayed IF signals.” The Office Action cites *Pecen*’s Figure 3 as disclosing this limitation. Office Action page 8. However *Pecen* is silent concerning a digital delay stage, much less delaying incoming signals and outputting delayed IF signals. Claim 20 also recites “a variable gain stage receiving said delayed IF signals.” As explained, Figure 3 in *Pecen* fails to disclose a delayed IF signal, therefore *Pecen* fails to teach “a variable gain



stage receiving said delayed IF signal.” Furthermore, claim 20 recites “means for monitoring RF interference.” The Office Action states this limitation is taught by *Pecen* because *Pecen*’s disclosure of bit error rate monitoring inherently discloses “means for monitoring RF interference.” Office Action page 8. However, *Pecen* explains the bit error rate is caused by the receiver amplifiers not operating in their linear range rather than by RF interference. As a result, *Pecen* fails to disclose “means for monitoring RF interference.”

Further still, claim 20 recites “means for gathering statistical information about periodicity.” The Office Action cites *Jagger*, col. 5, lines 21-34 as teaching this limitation. Office Action Page 9. However, as discussed above, *Jagger* fails to teach gathering information about the periodicity of interference. *Jagger* discloses gathering information about “time of occurrence, frequency, and duration of interfering signal presence” but fails to gather information about the period of “interfering signal presence.” Col. 5, lines 21-34. While col. 5, line 25 uses the word “periodic,” the word fails to disclose the limitation in claim 20. *Jagger* is explaining that occasionally (periodically) records can be made of the received CDMA power level. Col. 5, line 25. Therefore, *Jagger*’s use of the word “periodic” fails to teach “gathering statistical information about periodicity...of RF interference.”

Likewise, claim 20 recites “means for controlling variable gain stage in responses to said gathered statistical information.” The Office Action indicates *Pecen* teaches this limitation. However, as also discussed above, *Pecen*’s gain adjustments are not based on statistical information regarding the period and duration of RF interference. Instead, *Pecen* adjusts the gain “to insure that the received signal level output by at 314 is not so large that receiver amplifiers (shown and not shown) are not operating in their linear range.” *Pecen*, col. 4, line 17-20. Furthermore, claim 20 recites “to adjust gain of said delayed IF signals.” While the Office Action cites figure 3 of *Pecen* as teaching “delayed IF signals,” *Pecen* fails to teach delaying IF signals as required by claim 20.

Finally, claim 20 recites “mitigating effects of said RF interference on said signals.” Page 8 of the Office Action states *Pecen* teaches this limitation. However, as also discussed above, *Pecen* fails to disclose mitigating the effects of RF interference. Rather, *Pecen* mitigates against the effects of receiver amplifiers operating outside their linear range. *Pecen*, col. 4, lines 17-20.

For at least the foregoing reasons, the combination suggested by the Office Action fails to teach or suggest each and every limitation of claim 20. Therefore, Applicant respectfully contends claim 20 is patentable over the 35 U.S.C. § 103(a) rejection of record.

Claims 21-25 ultimately depend from claims 20, and thereby inherit all the limitations independent claim 20. Therefore, at least for the reasons advanced above, Applicant respectfully asserts each of claims 21-25 are patentable over the 35 U.S.C. § 103(a) rejections of the record.

#### 4. Claims 26-30

Independent claim 26 recites “a digital delay stage delaying incoming RF data signals and outputting delayed IF signals.” The Office Action cites *Pecen*’s Figure 3 as disclosing this limitation. However, as discussed above, *Pecen* does not teach a digital delay stage, or delaying incoming signals and outputting delayed IF signals. Claim 26 also recites “a variable gain stage receiving said delayed IF signals.” As explained above, Figure 3 in *Pecen*, cited by the Office Action, fails to disclose a delayed IF signal, therefore *Pecen* fails to teach “a variable gain stage receiving said delayed IF signal.”

Further still, claim 26 recites “a statistical gathering engine collecting periodicity...and strength information about RF interference.” The Office Action cites *Jagger*, col. 5, lines 21-34 as teaching this limitation, however *Jagger* fails to teach gathering information about the periodicity and strength of interference. Office Action Page 9. *Jagger* discloses gathering information about “time of occurrence, frequency, and duration of interfering signal presence” but fails to gather information about the periodicity and strength of “interfering signal presence.” Col. 5, lines 21-34. As discussed above, col. 5, line 25 of *Jagger* does use the word “periodic.” However, in this context *Jagger* is explaining that occasionally (periodically) records can be made of the received CDMA power level. Therefore, *Jagger*’s use of the word “periodic” fails to teach “gathering statistical information about periodicity...of RF interference.”

Likewise, claim 26 recites “a response stage adjusting said variable gain stage in responses to said periodicity and duration information.” The Office Action cites *Pecen* as



teaching this limitation, however *Pecen*'s gain adjustments are not based on information regarding the period and duration of RF interference. Instead, *Pecen* adjusts the gain "to insure that the received signal level output by at 314 is not so large that receiver amplifiers (shown and not shown) are not operating in their linear range." *Pecen*, col. 4, line 17-20.

Finally, claim 26 recites "mitigating effects of said RF interference on said signals." Page 8 of the Office Action states *Pecen* teaches this limitation, however *Pecen* fails to disclose mitigating the effects of RF interference. Rather, *Pecen* mitigates against the effects of receiver amplifiers operating outside their linear range. *Pecen*, col. 4, lines 17-20.

As a result, the combination suggested by the Office Action fails to teach or suggest every limitation of claim 26. Therefore, Applicant respectfully contends claim 26 is patentable over the 35 U.S.C. § 103(a) rejection of record.

Claims 27-30 ultimately depend from claim 26, and thereby inherit all the limitations of independent claim 26. Therefore, at least for the reasons advanced above, Applicant respectfully asserts each of claims 27-30 are patentable over the 35 U.S.C. § 103(a) rejections of the record.

**B. The Office Action Does Not Provide the Requisite Motivation**

In addressing claims 1-3, 6 and 13-19, the Office Action admits that *Pecen* fails to teach "means for tabulating statistical information about periodicity and duration of RF interference." Office Action page 2. The Office Action attempts to cure this deficiency by introducing *Jagger*, which the Office Action alleges teaches "means for tabulating statistical information about periodicity and duration of RF interference." Office Action page 2.

In addressing claims 20-34 (and claims 26-30), the Office Action admits that *Pecen* fails to teach "means for gathering statistical information about RF interference" and "means for tabulating statistical information about periodicity and duration of RF interference." Office Action page 8. The Office Action attempts to cure this deficiency by introducing *Jagger*, which the Office Action alleges teach this limitations Office Action page 9.

Pages 3 and 9 of the Office Action provides motivation for the combination is as follows:

It would have been obvious to one skilled in the art at the time of invention to combine the teachings of Jagger et al. with the invention of Pecen as a method of reducing the adverse effects of interference.

It is well settled that the fact that references can be combined or modified is not sufficient to establish a prima facie case of obviousness, M.P.E.P. § 2143.01. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990), as cited in M.P.E.P. § 2143.01.

A review of *Pecen* fails to reveal a desire to direct gain in order to “reduce the adverse effects of interference” as suggested by the Office Action. Office Action page 3. Instead, *Pecen* is directed to insuring that receiver amplifiers are operating in their linear range. *Pecen*, Col. 4, lines 17-22. Furthermore, the suggested combination fails to improve *Pecen* because *Jagger*’s collection of the duration of RF interference will not aid in insuring *Pecen*’s amplifiers operate in their linear range as *Pecen* makes no allowance for use of such information. As a result, one of ordinary skill in the art would not be motivated to make the combination suggested by the Office Action.

Thus, the motivation provided by the Office Action is improper, as the motivation must establish the desirability for making the combination. Whereas, no valid suggestion has been made as to why a combination of *Pecen* and *Jagger* is desirable, the rejection of the claim 1 should be withdrawn.

#### IV. Conclusion

For all the reasons given above, Applicant submits that the pending claims distinguish over the prior art under 35 U.S.C. § 103. Accordingly, Applicant submits that this application is in full condition for allowance.

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Docket No.: 68144/P002US/10501219

Applicant believes no fee is due with this response. However, if a fee is due, please charge Deposit Account No. 06-2380, under Order No. 68144/P002US/10501219 from which the undersigned is authorized to draw.

Applicant respectfully requests that the Examiner again call the below listed attorney if the Examiner believes that the attorney can be helpful in resolving any remaining issues or can otherwise be helpful in expediting prosecution of the present application.

Dated: September 14, 2005

Respectfully submitted,

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